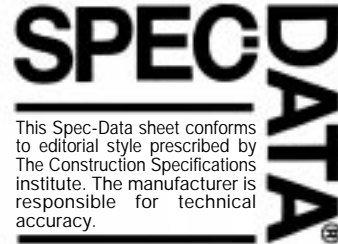


# Architectural Surfaces, Inc.

**DISTINCTIVE WOOD & SPECIALTY ACOUSTICAL CEILING & WALL SYSTEMS**

123 Columbia Court North • Suite 201 • Chaska, MN 55318  
 952-448-5300 • Fax: 952-448-2613 • Toll Free: 1-800-710-8791  
 e-mail: info@architecturalsurfaces.net  
 Visit Our Web Site at www.architecturalsurfaces.net

**CEILING YOU CAN LOOK UP TO!**



This Spec-Data sheet conforms to editorial style prescribed by The Construction Specifications Institute. The manufacturer is responsible for technical accuracy.

## 1. PRODUCT NAME

Fire-Rated Particleboard  
 Duraflake FR

## 2. MANUFACTURER

Willamette Industries, Inc.  
 Duraflake Divisions  
 Building Materials Group  
 PO Box 428  
 Albany, OR 97321  
 Phone: (541) 928-3341  
 FAX: (541) 928-4116

## 3. PRODUCT DESCRIPTION

**Basic Use:** Duraflake FR is a Class 1 rated fire retardant particle board, suitable for a variety of industrial and commercial building applications where stringent building codes, public safety requirements or reduced insurance rates are a factor. It is used as a substrate for wood veneers, high and low pressure laminates and vinyls in wall systems, as well as furniture and fixtures. It can be drilled, routed, bullnosed, beveled and precision-machined without affecting the flame spread rating.

**Limitations:** Duraflake FR should be specified for interior use only.

**Composition and Materials:** Duraflake FR is made from Western soft wood particles and highly effective fire retardant chemicals bonded with special formulas of resins and waxes.

**Grade:** Industrial Grade

**Sizes:** Standard-4' x 6', 4' x 8', 4' x 10', 4' x 12', 5' x 8'. Other sizes available upon request from distributor.

**Finishes:** From outside sources, Duraflake FR is available laminated with wood veneer and low pressure laminates. Please call **Architectural Surfaces Inc.** at **1-800-710-8792** for availability or quote on laminated panels.

**Note:** Some laminates applied to Duraflake FR may change the flamespread rating of the composite panel. Applicable Standards: ASTM E84 tunnel test. Material and Equipment Acceptance Division, New York City. ASTM C 236, Guarded Hot Box test. UL 723 Test for Surface Burning Characteristics of Building Materials.

**Chemical Properties:** Available upon request.

## 5. INSTALLATION

**Preparatory Work:** Duraflake FR is a wood based panel and is considered an interior product. It must never be stored or used outside. Store flat under constant relative humidity and temperature conditions. Allow to stabilize prior to use.

### Physical Properties of Duraflake FR:

	Duraflake FR* 3/8"-3/4"	Duraflake FR 13/16"-1-1/4"
Density (lbs./cu ft.)	45.0	44.0
Modulus of Rapture	1600 psi	1300 psi
Modulus of Elasticity	300,000 psi	300,000 psi
Internal Bond	80 psi	60 psi
Elongation	0.40%	0.35%
Screw-holding		
Face	250	250
Edge	225	175

\*Conforms to ANSI A208.1-1987, Grade 1-M-1

## 4. TECHNICAL DATA

**Underwriters' Laboratories, Inc.:**  
**Classified Wood Particleboard:**  
 Surface Burning characteristics, UL 723 (Based on 100 for untreated red oak).

Flame Spread	20
Smoke Developed	25

See UL Classified Building Materials Index. Listed under Wood Particleboard.

### Thermal Conductivity (k) and thermal Resistance (1/k = R)\*:

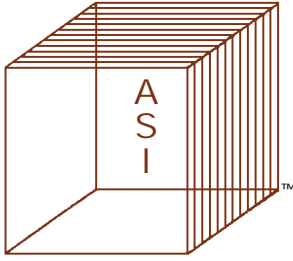
	3/8"	1/2"	3/4"	1"
k=	0.54	0.62	0.55	0.69
R=	1.85	1.61	1.82	1.45

\*R and K values obtained using ASTM C 236 "Thermal conductance and transmittance of built-up wall sections by means of the 'Guarded Hot Box' in tests conducted by Northwest Testing Laboratories."

Ideally those conditions should be the same as those expected after the panel is installed. Laminates, if any, must be conditioned to the same state as Duraflake FR During installation, good practices standard to fine woodwork must be used. Please contact the Architectural Woodwork Institute (AMI) at (703) 222-1100 or Woodwork Institute of California (WIC) at (916) 233-9035 for specific standards. When used in wall systems, an integral vapor barrier must be part of the wall if the wall is exterior or the wall separates spaces conditioned unequally.

**Methods:** Duraflake FR can be laminated with both hot and cold press laminates. Balanced construction is advised. Most standard available woodworking

Continue on next page.



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glues have been successfully used in laminating. However, some adhesives have compatibility problems with the chemical system used to treat Duraflake FR. Any adhesive should be tested for compatibility before full scale gluing. Any questions about compatibility, spread rates, cure times and press temperature should be directed to the glue supplier or the manufacturer.

**Hot Pressing:** When hot pressing laminates on Duraflake FR, use the shortest cycle time allowable within the range specified by laminate and glue suppliers. Extended cycle times or high heat may induce blows. Due to the interaction of high heat and the chemical treatment, some low pressure paper laminates may exhibit visual changes in opacity. In hot pressing, care must be taken to cool the panels to 140°F before stacking to preclude heat degradation.

**Cold Pressing:** Urea, casein and epoxies have been used successfully

to bond laminates to Duraflake FR. Some contact cements and PVAs are incompatible. Their suitability should be cleared before using. With resorcinol glues, certain conditions are needed for best results due to the slightly acidic nature of the retardant chemicals, which tend to slow down cure rates.

**Building Codes:** BOCA, ICBO and SBCCI

**Agency Approvals:** City of New York MEA 177-78-M; State of California Fire Marshal 2660-831:1; City of Los Angeles PR 24811; City and County of San Francisco 258W34.1

## 6. AVAILABILITY AND COST

**Availability:** Duraflake FR is available from **Architectural Surfaces Inc. 1-800-710-8792.**

e-mail: [info@architecturalsurfaces.net](mailto:info@architecturalsurfaces.net)

**Cost:** Call **Architectural Surfaces Inc. 1-800-710-8792** for current costs.

## 7. WARRANTY

The Duraffake Division of Willamette Industries, Inc. warrants Duraflake FR to be free of manufacturing defect, both in material and workmanship. Duraflake FR will perform in accordance with the specifications and applications listed when used according to directions herein. No other warranty or guarantee is made.

## 8. MAINTENANCE

None required for interior use when installed in conformance with manufacturer's instructions.

## 9. TECHNICAL SERVICES

For details concerning the technical aspects of Duraflake FR, call (541) 928-3341 or FAX (541) 928-4116.

## 10. FILING SYSTEMS

• CSI's SPECSEARCH™

• IHS' SPEC-DATA II

• Additional product information, full literature and technical assistance available upon request.